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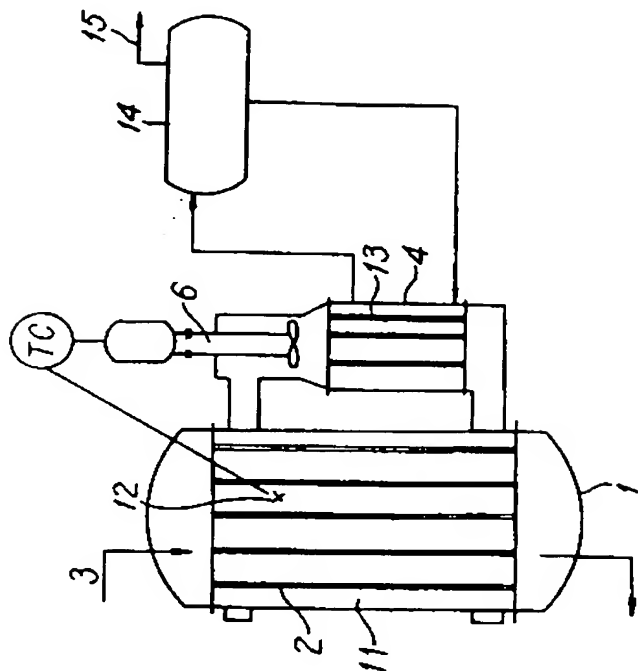
APPLICATION DATE : 31-08-82
APPLICATION NUMBER : 57149895

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TITLE : REACTION APPARATUS



ABSTRACT : PURPOSE: To make a reaction apparatus compact, by a method wherein a control valve and a recirculation route of withdrawal pump-cooler-control valve are disused and a cooler and a recirculation pump are provided so as to be directly communicated with a reactor from the outside.

CONSTITUTION: A tube bundle group 2 filled with a catalyst is provided in a reactor 1 and a recirculation pump 6 communicated with a heating medium flowing space 11 for flowing a heating medium around the tube bundle group 2 of the reactor 1 and a heating medium cooler 4 directly communicated with the pump 6 and also communicated with the heating medium flowing space 11 of the reactor 1 are attached to the external part of the reactor 1 in series. A process fluid 3 is flowed downwardly through the tube bundle group 2 from the upper part of the reactor 1 or raised through the tube bundle group 2 from the lower part of the reactor 1 to perform reaction and to generate reaction heat which in turn performs the control of the number of rotation of the recirculation pump according to the set temp. of a temp. controller TC.

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